

Finding of No Significant Impact

Special Cave Tours Oregon Caves National Monument

PURPOSE and NEED for ACTION: The purpose of the proposed federal action is to increase the diversity of cave tours conducted at Oregon Caves National Monument in order to better meet the needs of visitors and the interpretive objectives of the National Park Service (NPS). These proposed program enhancements are intended to fulfill the vision of the 1998 General Management Plan (and Final Environmental Impact Statement), which stated that the “NPS will thoroughly investigate the feasibility of developing alternative tours through the cave including special children’s tours, ‘wild caving’ experiences, and candle light tours.” In support of this investigation, the park operated limited caving, lantern, and children tours on a trial basis in 2001. Results were analyzed to determine what variety and frequency of these types of experiences would be feasible to offer as a part of the ongoing interpretive and education program at the Monument, without impairment of park values and/or resources.

SELECTED ALTERNATIVE: The National Park Service will implement a modification of the Proposed Action (also described in the Environmental Assessment as Alternative B), based in part on public comments, agency and subject-matter expert consultations, and further consideration of park capabilities at this time. The proposed program consists of the following elements (in addition to the basic tours which have traditionally been offered at the park and will continue): the park will conduct lantern tours, geology tours, and children’s tours. The selected alternative does not include “off-trail” tours. A three-hour long introductory off-trail caving tour for visitors may be considered after further review as part of the process for completion and approval of the revised Cave Management Plan. Details are as follows:

- A. Dependent on consideration of park capabilities, allow for geology and children’s tours.
- B. Dependent on consideration of park capabilities, allow for lantern tours following completion of all relevant mitigation measures. (see Mitigation Matrix for Selection Actions).
- C. Ensure that environmental compliance has been followed for all mitigation measures and then instigate. (see Mitigation Matrix for Selection Actions).

Under these modifications of the Proposed Alternative, the NPS would offer more varied experiences for Monument visitors, while at the same time ensuring that no impairment of park resources occurs. Presently the public tour route is the only opportunity for visitors to directly enjoy the resources of Oregon Caves. These special tours are not meant to replace the current basic tour, but to enhance existing visitor services and provide additional visitor experiences. If fully implemented as modified, these expanded tours will accommodate a maximum of approximately 1400 from children’s tours (likely

no net increase from candlelight or geology tours), a minor net increase from the current actual annual tour visitation of 54,469 (in 2002). The annual actual capacity varies from year to year due to slightly different opening and closing dates, holiday occurrences, and hours of operation based on calendar variances. No new routes are to be used; a map depicting all types of tours, which are to be operated according to the terms of the modified Proposed Alternative, is contained in an Errata prepared to record minor corrections and clarifications to the Environmental Assessment (EA); see additional discussion below.

Park operations necessary to implement the Proposed Alternative may continue on an interim basis until completion of the scheduled revision of the Monument's Cave Management Plan (CMP). During this interim period, baseline studies intended to measure human impacts will continue; these may include, but are not limited to, photomonitoring, qualitative impact mapping, quantitative compaction mapping, air and water monitoring, DNA sampling of microbial populations, and archaeological, historical, mineralogical, bat, invertebrate, broken speleothem, and paleontological surveys. Upon completion of the CMP revision process, which is to include public involvement, and based in part on re-evaluation of the park's service capabilities and data from the baseline studies, these special tours may be expanded, maintained or reduced.

RANGE of ALTERNATIVES CONSIDERED: The EA identified and analyzed five alternatives, including a no-action alternative, all of which incorporated the traditional basic tours offered at the park since 1911.

Alternative A (No Action) – Maintain existing programs and management activities.
Alternative B (Environmentally Preferred) - Special cave tours with three-hour caving tour.
Alternative C - Special cave tours with four- to five-hour caving tour.
Alternative D - Special cave tours with 1 to 1-1/2 hour caving tour.
Alternative E - Special cave tours; no caving tour.

Under **Alternative A** (No Action), basic cave tours are personally guided by park staff along a paved trail in the main cave in the Monument. The tours take about 90 minutes. During the peak visitation period, tours are spaced about 15 minutes apart and regularly scheduled from 9 a.m. to 7 p.m. On particularly high visitation days tours may be extended beyond 7 p.m. to accommodate waiting visitors. Existing uses of the cave and current conditions would continue as they are under current management. No Action continues existing management, and thus does not imply or direct discontinuing any present actions or removing existing uses, development, or facilities. This alternative would only partly meet the purpose and need for federal action as was expressed in the EA (and reiterated above).

As described in the EA, under **Alternative B** (Proposed Action) the traditionally offered basic cave tours would continue as at present. In addition, Ranger-guided caving tours would be conducted along an established undeveloped route (850 feet of dirt or rock substrate excluding the paved trail access) through the cave, but off of the paved basic

tour route. The caving tour would take about three hours and go to the South Room and back via the Sand Room. This route would provide visitors with a natural caving experience without interfering with visitors on other tours. Tour size would be limited to a maximum of six visitors and two park staff (guides). This tour would be offered for approximately 75 days per year from late June to early September with a maximum of one tour per day. There would be a phone-in registration system but walk-ins would also be accommodated if space were available. The park would provide hard hats, headlamps, kneepads, and gloves. Only electric lights would be allowed on the caving tour. This tour combined with the basic tours would add a maximum potential of two to six visitors per day for about 75 days.

Ranger-guided lantern tours would have a maximum of 12 visitors and be conducted along a paved portion of the public cave trail. This would be a 90-minute tour given once daily for approximately 75 days per year from June to September. The tour would not be in addition to regular tours but rather would replace the 6:45 p.m. and 7 p.m. basic tours. Providing this tour on a daily basis would thus result in a potential of 18 fewer persons per day in the cave for about 100 days. The tour would travel along the existing paved trail starting from the main entrance. It would proceed to the Ghost Room Platform and return to 110 entrance via the Rimstone Dam and Popcorn Rooms. The distance walked would be about the same as the basic tour. Candles would be used inside a lantern that prevents all wax spillage. Approximately 60 feet of the tour would be on restored fill material, giving visitors a little bit of a natural caving experience. Guidance for visitors would be similar to that used on basic tours but would include extra safety precautions concerning dimmer light than what exists with the basic tours, and taking care not to touch hot surfaces or hit formations with the lanterns.

A 90-minute in-depth ranger-guided geology tour would occur along the existing paved pathway. Except for the focus on geology, the tour would be the same as the basic tour in terms of time, the route traveled, safety instructions, etc. This tour would replace one basic tour. There would be no net change in maximum potential visitation within the cave, just the addition of the geology theme. A ranger-guided cave tour for children too short to take the basic public tour would be conducted. Parents would accompany this tour. The tour route would be on the paved cave trail from the 110 Entrance to Niagara Falls and returning via the same way. This tour would be scheduled on an “as needed” basis in place of regularly scheduled basic tours. Based on the number of visitors per year turned away from a cave tour because their children were too short for the regular tour, the estimate would be 1400 extra visitors per year in the cave.

Under **Alternative C**, the NPS would conduct a longer caving tour route (4-5 hours) than Alternative B. It would include traversing over or immediately adjacent to paleontological resources, soda straw cave formations, and additional crystal clusters. No new cave formations would be seen on this tour that would not be seen on the shorter caving tours or the basic tour.

Under **Alternative D**, the NPS would conduct a one to one-and-a-half-hour, 780-foot long caving tour that would journey to the South Room and return by the same route.

This alternative is the same as Alternative B except for variations in the caving tour route. This alternative, however, would avoid most of the more interesting formations and climbing opportunities.

Under **Alternative E**, the NPS would conduct all tours identified in Alternative B (Preferred Alternative) except the caving tour.

Alternatives Rejected: In addition to these 5 alternatives, several other options were considered initially, but were not developed as alternatives for further analysis in the EA. These include: Short tours off of the established paved trail; Lantern tour ending at the beginning of the Exit Tunnel; Keeping the basic public tours open during the winter; Not giving any caving, geology, lantern, or basic cave tours. These options were rejected from detailed conservation planning and environmental impact analysis because they neither met the expressed purpose and need for federal action, nor adequately fulfilled the intent of the approved General Management Plan.

Environmentally Preferred Alternative: As documented in the EA, Alternative B was deemed to be the “environmentally preferred” alternative because it surpasses the other alternatives in realizing the full range of national environmental policy goals as stated in Section 101 of the National Environmental Policy Act. The modification of this alternative does not change this finding. In particular, the Proposed Alternative provides the widest range of recreational and educational opportunities to the public while ensuring no impairment of park resources. Both these objectives are achieved through mitigation measures tied to responsible parties and critical milestones listed below.

Alternative A (no action) was found to not be environmentally preferred because it does not provide a wide range of recreational and educational opportunities to the public as envisioned under the approved General Management Plan.

Alternative C was found to not be environmentally preferred because it could lead to inadvertent damage to a larger number of formations than are present along the route proposed in Alternative B (Preferred Alternative).

Alternative D was found to not be environmentally preferred because nearly the entire time of the tour would be taken up with putting on caving gear, instruction by visual media and by example on safety and conservation, mitigation methods after the trip such as changing shoes, etc., and removal and cleaning of caving gear.

Alternative E was found to not be environmentally preferred because it does not provide the wide range of recreational and educational opportunities as envisioned under the approved General Management Plan.

BASIS for DECISION: As documented in the EA, the NPS has determined that Alternative B could be implemented without significant adverse impact to cave features, air quality, water quality, floodplains, wetlands, socioeconomic environments, sediments, threatened and endangered species, cultural resources, and other park resources

associated with the cave system. As discussed below, these findings apply as well to the Proposed Alternative, which is a modification of Alternative B. Furthermore, the mitigation measures listed in the accompanying Matrix are intended to avoid, reduce, mitigate, or eliminate the unacceptable effects of any potential increase in organics, trampling, sediment compaction, accidents, vandalism, temperature, lights, or other environmental consequences which may ensue as a result of implementing the Proposed Alternative.

Air Quality: The changes in carbon dioxide and heat levels represented by differences from special tours would be negligible or not measurable. Exhalation by both visitors and tour guides in the main cave likely increases the average humidity in the upper parts of the cave during the summer because relative humidity sometimes falls below 100%. However, any additions are more than likely offset by increased dryness in the cave due to decreased surface water infiltration resulting from vegetation increases caused by decades of fire suppression. Particulates from skin, clothing or shoes could increase atmospheric condensation (“cave fog”), but this has only rarely been observed in Oregon Caves and it is not likely to be from people. No flashlight visible smoke or other induced aerosols were detected during trail runs using the new candle lanterns.

Cave Formations: Damage could occur from deliberate vandalism or from not watching one’s head in relation to the ceiling in a fifty-foot stretch of the cave.

Cultural Values: Based on an intensive archeological survey by two NPS archeologists in the summer of 2003, there is no evidence of Native American use or artifacts on or near any of the proposed routes. Historic signatures could be vandalized along the paved route but this apparently has happened only in a minor way (no obliteration of signatures) since tours on the main paved trail were instituted in the early 1900s. There are no historic signatures likely to be vandalized on the caving route and no additional ones (compared to the basic tour) on the candle light tour.

Health and Safety: Given the maximum amount of time rangers and the public would spend along the various routes in the cave, radon concentrations do not constitute a hazard. Given the history of trail use and compliance with mitigations, it is unlikely that any serious accidents will occur along the various proposed routes.

Paleontology: It is likely that bones underlie the trail; however, it is highly unlikely that the possibility of increased compaction would damage such material. It is even less likely that significant fossil resources would be damaged. The possibility of the compacted surface being broken by a shoe and any bone being disturbed is very low, but not zero.

Sediment Compaction or Translocation: Only the caving and lantern tours might cause this. Compaction and release of organics might reduce aerobic microbial activity and increase anaerobic activity but it does not seem likely that any further compaction would adversely affect cave biology. Some mud would be tracked through the cave as a result of the proposed tour, especially in spaces between boot lugs. Increased nutrients can result from disturbance of mud (increased surface area of nutrients for microbes), and

deposition of organic particles from visitors (hair, skin flakes, lint) but this likely is not measurable. In the last 17 years, over 40,000 square feet of trail compacted sediment has been removed from the cave, at least several orders of magnitude greater than any possible increased in trail compaction from use of any of the proposed trails.

Water Quality: Any affects would likely not be measurable except for slight increases in total dissolved ions in puddles next to the paved trail. As mentioned in the EA, e-coli will be sampled to ensure that no human wastes are contaminating water draining from the proposed caving route.

Wildlife: A few invertebrates could be stepped on accidentally. Between zero and three bats might be disturbed during the caving tour. Between zero and 20 bats (at start of regular public tours in late March) might be disturbed during the other tours.

Cumulative Impacts: Particle buildup on the caving route would likely be insignificant and not measurable. Human inputs of carbon dioxide (exhalation), body heat, heat from lights and organics is unlikely to be cumulative due to oxidation, natural airflow in the cave and the tiny incremental increases of temperature and carbon dioxide from those objects. Trail sediment compaction would likely be slightly cumulative at diminishing returns but the effect is likely to be minor (that is, very localized although possibly measurable). Changes on wildlife populations would not likely be cumulative. Given the slow renewal of cave formations and deposition of bones under the current cave climate, damage to cave formations or fossils could be cumulative but of minor or negligible effect as it is not expected that the damage, if any, would be measurable.

MITIGATION MATRIX for PROPOSED ACTIONS (Modification of Alternative B)

Potential Impacts	Mitigation Measures	Responsible Party and Critical Milestones
<p><i>Sediment:</i> Some material would stick to boots. Some sediment could be kicked up and become airborne although the high humidity and wetness of the sediments would likely make this not measurable.</p> <p>Further compaction on the trail could occur which could alter nutrient and oxygen availability for bacteria or change waterflow.</p>	<p>Visitors and park staff will clean shoes before getting back on the paved trail. Park would provide shoes for those visitors with deep lug boots. If the amount eventually reaches several pounds, it will be transferred back along the route. Heavy individuals generally are excluded from tour.</p> <p>The present amount of compaction and guidance from the park guides and the paved, flagged and/or taped routes to stay on the trail should keep measurable future compaction far below that of past removal of trails and future removal and reducing compaction of other trails.</p> <p>Monitoring will determine if further compaction (if any) is affecting microbial diversity.</p>	<p>Chief of Interpretation - Purchases shoes by 6/15/06</p> <p>Physical Science Technician - Installs cleaning station by 5/1/06</p> <p>Physical Science Technician – Completes baseline penetrometer (quantitative) and Bodenhammer impact (qualitative) mapping by 7/1/06</p> <p>Western Kentucky University - Finishes DNA baseline by 7/1/04</p>
<p><i>Water Quality:</i> A rivulet could be stepped on. A dropped battery or human waste could degrade water quality.</p>	<p>Stepping in the rivulet (seasonal trickle) would not constitute a significant impact. Nevertheless, visitors will be cautioned by park guides to step over the rivulet. All batteries would be accounted for at the end of each trip. Containers will be provided to contain human wastes.</p>	<p>Grants Pass Water Lab – Completes E-coli sampling by 4/06</p>
<p><i>Fossils:</i> Buried bones could be stepped on or trace fossils such as claw marks and tracks could be damaged.</p>	<p>No fossil sites that could be affected by being stepped on are known from any of the proposed routes. A paleontologist will monitor possible impacts after a hundred or so visitors travel over the proposed routes. The flagged trail and guidance from the park guides to stay on the trail and not grind one's heels into the sediment will prevent any traffic over possible trace fossils or significant damage to bones.</p>	<p>Dr. Richard Toomey - Completes Fossil Survey of all routes by 6/1/06</p>

<p><i>Geology:</i> Small pieces of wallrock might be knocked off ceilings by being hit by helmets or while climbing or crawling. Quartz dikes and visible crystals of calcite could be damaged.</p>	<p>Visitors will be monitored and cautioned by park guides to watch where their heads are in relation to the ceiling, where their hands are in relation to fragile formations and not to flail legs, etc. while crawling or climbing.</p> <p>Fragile areas will be flagged with precautionary red tape.</p> <p>Photomonitoring baselines will help detect any damage to fragile cave formations.</p> <p>Broken crystal cluster carbonates will be x-rayed to assess rarity.</p>	<p>Natural Resources Specialist – Certifies guides prior to tours</p> <p>Physical Science Technician-Flagging completed by 6/1/04</p> <p>Jim and Val Werker – Photo-points installed by 1/1/04</p> <p>Natural Resources Specialist – Inputs data into Investigator’s Report by 5/1/06</p>
<p><i>Wildlife:</i> Possible minor adverse effects on populations of invertebrates from trampling and possible minor short-term effects on a few bats out of about 750 bats known to use the main cave.</p> <p>The amount of lights may disturb both bats and invertebrates but will not cause algal or bacterial growth.</p> <p>Wax from candles could be a food source for microbes.</p> <p>Skin flakes, hair and lint could impact invertebrates</p>	<p>Based on two trampling studies, the limited number of visitors on all proposed the caving route per year will likely prevent measurable increases in trampling.</p> <p>Visitors are cautioned to watch where they step and to reduce sounds and lights if invertebrates are encountered. Red lights and no talking will be mandatory for viewing bats.</p> <p>Future monitoring of bats will be compared to baseline data to determine if populations are affected.</p> <p>The type of candle lantern proposed will prevent wax spillage.</p> <p>Install tarps to capture human organics under stairs</p> <p>Photographing of passive pitfall traps, macro-visual identification and comparison with past trap data</p>	<p>Natural Resources Specialist – Analyzes weekly wildlife counts (starting 12/02) on most routes by 5/1/06</p> <p>Natural Resources Specialist – Certifies guides prior to tours</p> <p>Physical Science Technician – Anabat survey done by 7/15/04</p> <p>Chief of Interpretation – All lanterns assembled by 6/1/04</p> <p>Physical Science Technician - Installs tarps by 4/1/06</p> <p>Physical Science Technician - Study begins 10/1/04 and ends 10/1/06</p>

<p><i>Safety:</i> Traversing over pits or slick rock could pose hazards, especially for those individuals not used to such action. An injury to a visitor is likely to cause damage to the cave during a rescue.</p> <p>Radon might increase the probability of developing lung cancer, especially to those who smoke nicotine.</p>	<p>Park guides and visitors will be instructed by park guides on how to cave safely. All visitors will be roped up while traversing an open pit and will be guided as to how to traverse a narrow pit safely. Helmets and long pants will be mandatory.</p> <p>Because of the amount of time that park guides and visitors are allowed in the cave is limited; no limits involving Working Levels of radon will be exceeded.</p> <p>Smokers will be advised that taking the caving tour could increase their risk from radon.</p>	<p>Natural Resources Specialist – Certifies guides prior to tours</p> <p>Landauer, Inc. – Reports Avg. Radon Conc. Pci/l For whole year by 7/29/05</p>
<p><i>Air Quality:</i> Visitors would deposit lint and skin cells, increase humidity from sweating, add smoke from candles, increase temperatures from human bodies, and increase carbon dioxide from breathing.</p>	<p>Flickering electric lights or smokeless candles would be used. However, because of the number of people allowed on the tours, it is likely that air impacts would not be measurable except in the immediate vicinity of the visitor.</p>	<p>Physical Science Technician – Sampling of atmospheric Particulates and carbon dioxide By 7/1/06</p>
<p><i>Cultural Resources:</i> No effects on cultural resources anticipated because no significant cultural resources are known to be present in the project area and all travel will be over a heavily used caving route and not over any undisturbed substrates.</p>	<p>Complete baseline archeological survey</p> <p>Complete baseline historical survey</p>	<p>Kirstie Haertel, NPS Archeologist - Completes survey of all routes By 10/01/03</p> <p>Steve Mark, NPS Historian – Completes survey of all routes By 6/1/06</p>

PUBLIC and AGENCY INVOLVEMENT: Several scoping meetings for the GMP were held in 1996 with the public, interest groups, and stakeholders and 88 letters were received during the scoping period. A total of 111 people attended public workshops in 1998, and 980 written comments were received on the GMP\EIS. These efforts surfaced the following issues and concerns relevant to cave tours:

1. Several commenters thought that cave tours should be led by professional NPS trained employees instead of present (1998) concession guides. It is not clear whether such comments would apply to the proposed special tours.
2. One commentator commented that “Protection of bat species, especially while hibernating and roosting, should take precedence over guided tours.”

3. One commentator pointed out that recent discoveries indicate that the cave's biological and paleontological resources were greater than originally thought. He then ask how the park was going to incorporate these findings into management recommendations, scientific research needs, staffing needs, and resource protection issues.
4. Another commentator commented that it was good that the carrying capacity of the cave was addressed.
5. The most detailed comment on the GMP relevant to the proposed tours was a recommendation that the primary tour be continued but that "identified expanded routes for tours be announced for spelunkers who want more than the general visitor now receives." According to the author, when visitors read his book detailing the caves early explorations of passages not on today's tours, there seemed reason to expand tours into those passages.

The Park consulted with the Confederated Tribes of Grand Ronde, of which the Shasta Nation is an affiliated tribe. A 4/8/2002 letter from Connie Schultz, Cultural Resource Protection Specialist of the Confederated Tribes of Grand Ronde stated that it was understood that the proposed tours would be closely guided, the Park Service would not allow any visitor or NPS employee to collect any surface items and they would be contacted if NPS initiated ground disturbing projects, or made inadvertent relevant discoveries in an archeological context.

In addition to park staff, the NPS involvement with the proposed special cave tours included the NPS Geologic Resources Division, Ft. Collins, Colorado (Paleontology; Cave Management) and the Columbia Cascades Support Office, Seattle, Washington (Anthropology; Geology). Consults with other agencies included discussions with U.S. Fish and Wildlife Service, the Confederated Tribes of the Grand Ronde, and the Takelma ethnic group; a site visit by U.S. Forest Service cave resource managers from Mount Saint Helen's National Monument was conducted.

This information was considered at the outset of internal scoping for the EA during August 2001. Additional opportunities for public comment were provided, and a meeting was conducted with one individual in August of 2001. In December 2001 approximately 450 letters asking for input on a variety of proposed actions linked to the GMP/FEIS including special cave tours, were sent to all people on a mailing list for the General Management Plan. A 4/8/2002 letter was received from Connie Schultz, Cultural Resource Protection Specialist of the Confederated Tribes of Grand Ronde.

Approximately 13 responses from a total of seven individuals were received. The following issues, selected to be addressed in the EA (in addition to those mentioned above), emerged as a result this public input:

1. Appropriateness of the proposed tour route
2. Potential for damage to cave formations, and impacts to cave floor

3. Impacts to fossil resources
4. Hazard assessment
5. Potential impact on cave life

The Environmental Assessment was released on June 24, 2002. Approximately 450 notices of the availability of the EA on the Monument's website were sent to all people on the GMP mailing list. A notification that the EA was available on the park website was also e-mailed to all California, Oregon and Washington cavers with e-mail addresses as listed in the then most current National Speleological Society (NSS) Directory. No hard copies of the EA were made available as nobody requested one. Another notice was sent to the NSS members on July 18, 2002 that extended the public comment to August 27, 2002.

54 written comments were received. There were no concurrences from non-NPS agencies. Many written comments did not support a specific alternative so comments are broken down as follows:

Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	NOTA	Misc. +	Misc. -
1	36			10	1	5	1

Definitions

NOTA: none of the above, i.e. none of the listed alternatives are acceptable.

Miscellaneous +: Five individuals expressed interest and/or support of a caving tour, but did not comment on the EA.

Miscellaneous -: One individual expressed a viewpoint that did not support having a caving tour, but did not comment on the EA.

In addition to statements of support (38) or opposition (10), the main issues and concerns which emerged are as follows:

1. The need for more studies before implementation of caving tours.
2. Near universal support for aspects of the preferred alternative other than caving tours.
3. Near universal support for caving tours from the public who had participated in the trial run caving tours or had written on visitor comment forms.
4. Slightly more individuals identifying themselves as cavers supporting Alternative B compared to opposing it.

The park's responses to substantive comments received is contained in an Errata which was prepared as an attachment to the EA. The Errata is meant to provide clarifications and minor corrections.

NON-IMPAIRMENT of RESOURCES and PARK VALUES: The modified Proposed Alternative will not affect or impair cultural resources or any listed plant species. After consideration of the effects on potentially affected resources, it was determined that the selected actions will have (at most) a temporary, localized minor effects on air quality, water quality, non-soil sediments, and non-sensitive wildlife, and

will therefore not impair these park resources. Any potential adverse effects are either temporary and minor; are not affecting resources considered to be primary to the purposes for which the park was established; or can be ameliorated, so as to be essentially negligible. Therefore, there will be no permanent impairment of the known cultural and natural resources or park values for which Oregon Caves National Monument was established.

CONCLUSION: Based on the conservation planning and environmental impact analysis completed (as documented in the EA on Special Cave Tours at Oregon Caves National Monument), and the capacity of the mitigation measures to reduce or eliminate adverse impacts, and with due consideration of the public response received and the concurrence of agencies consulted, it is the determination of the NPS that the Proposed Alternative is not a major federal action significantly affecting the quality of the human environment. There are no significant connected actions or cumulative or indirect effects foreseen, nor is the selected action without precedent or similar to one that normally requires an environmental impact statement. Therefore, in compliance with the National Environmental Policy Act, the selected actions may be implemented on an interim basis as soon as practical and feasible.

Recommended: _____ *Date:* _____

Craig W. Ackerman
Superintendent, Oregon Caves National Monument

Approved: _____ *Date:* _____

Jonathan B. Jarvis
Regional Director, Pacific-West Region